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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/066,982	02/01/2002	Norm Hendrickson	41768/PYI/VI65	4215
23363	7590	09/19/2005	EXAMINER	
CHRISTIE, PARKER & HALE, LLP			MEEK, JACOB M	
PO BOX 7068			ART UNIT	
PASADENA, CA 91109-7068			PAPER NUMBER	

2637

DATE MAILED: 09/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/066;982

Applicant(s)

HENDRICKSON, NORM

Examiner

Jacob Meek

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 July 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 11 - 16, 18, 20, 25 - 28, 34 - 41, 47, 49 - 61 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 34 - 41, 47, 49 - 61 is/are allowed.
- 6) ☒ Claim(s) 11 - 16, 18, 20, 25 - 28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments, see page 12, filed 7/1/2005, with respect to claims 34 – 41, 47, and 49 - 61 have been fully considered and are persuasive in view of amended claims. The objection of claims 34 – 41, 47, and 49 - 61 has been withdrawn.
2. Applicant's arguments with respect to claims 11 – 16, 18, 20, and 25 – 28 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 11 – 16, 18, 25 - 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Kosaka et al (US-4,527,277).

With regard to claim 11, Kosaka discloses an RZ recovery system (see column 2, lines 34 – 37) comprising: filter configured to receive a data signal and to reduce high frequency components from data signal to from a filtered data signal (see figure 1, 100 and column 2, lines 34 – 37); recovery unit configured to receive filtered data signal (see figure 2, IN), identify a 1<sup>st</sup> type of data transition (see figure 2, 214; figures 3A & 4A; and column 3, lines 35 – 39), and provide phase information when 1<sup>st</sup> type of data transition is identified (see figure 2, 214; figures 3C & 4C; and column 3, lines 35 – 39); wherein recovery unit comprises phase detector (figure 2, 214) determining phase difference between a recovered clock signal (see

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figure 2, OUT) and data signal (see figure 2, IN); and wherein recovery unit further comprises an inhibitor (see figure 2, 218) receiving a phase difference signal and data signal, the inhibitor determining if 1<sup>st</sup> type of data transition has occurred (see column 3, lines 50 – 53).

With regard to claim 12, Kosaka discloses a recovery unit further comprising a loop filter (see figure 2, 202) receiving the phase difference signal from the inhibitor (see figure 2, 218) if 1<sup>st</sup> type of data transition has occurred (see figure 3E and 4E).

With regard to claim 13, Kosaka discloses a system wherein the recovery unit further comprises an oscillator (see figure 2, 204) and wherein loop filter (see figure 2, 202) filters the phase difference signal and provides filtered phase difference signal to oscillator (see column 2, line 64 – column 3, line 12).

With regard to claim 14, Kosaka discloses a system wherein filtered phase difference signal acts as a control voltage to oscillator (see column 3, lines 5 – 12).

With regard to claim 15, Kosaka discloses a system wherein oscillator generates the recovered clock signal based on the filtered phase difference signal (see column 4, lines 21 – 23).

With regard to claim 16, Kosaka discloses a system wherein oscillator adjusts the frequency of the recovered clock signal based on the filtered phase difference signal (see column 3, lines 10 – 12).

With regard to claim 18, Kosaka discloses an RZ recovery system (see column 2, lines 34 – 37) comprising: filter configured to receive a data signal and to reduce high frequency components from data signal to form a filtered data signal (see figure 1, 100 and column 2, lines 34 – 37); recovery unit configured to receive filtered data signal (see figure 2, IN), identify a 1<sup>st</sup> type of data transition (see figure 2, 214; figures 3A & 4A; and column 3, lines 35 – 39), and provide phase information when 1<sup>st</sup> type of data transition is identified (see figure

2, 214; figures 3C & 4C; and column 3, lines 35 – 39); wherein recovery unit comprises phase detector (figure 2, 214) determining phase difference between a recovered clock signal (see figure 2, OUT) and data signal (see figure 2, IN) when 1<sup>st</sup> data transition has occurred; and wherein phase detector determines if 1<sup>st</sup> type of data transition has occurred (see column 3, lines 50 – 53).

With regard to claims 25 – 28, the steps claimed as method are a restatement of function of the system of claims 11 – 16, and therefore would have been obvious given the aforementioned rejection of claims 11- 16.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Llewellyn (US-5,172,397) in view of Kosaka ('277).

With regard to claim 20, Llewellyn discloses an RZ recovery system (see figure 12, INPUT DATA and CLOCK where these waveforms are interpreted as an RZ waveform due to phase relationships) comprising: recovery unit configured to receive data signal (see column 5, lines 37 - 41), identify a 1<sup>st</sup> type of data transition (see figure 17, 121, 141 and column 7, lines 35 - 39), and provide phase information when 1<sup>st</sup> type of data transition is identified (see figure 6 and column 5, lines 11 - 21); wherein recovery unit comprises phase detector (figure 17, 83) determining phase difference between a recovered clock signal (see figure 17, Gated

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Clock) and data signal (see figure 2, Delayed Data); and wherein recovery unit comprises an inhibitor (see figure 2, 218) wherein the inhibitor provides the data signal to the phase detector when 1<sup>st</sup> type of data transition occurs (see column 5, lines 11 – 36). Llewellyn is silent with respect to the details of input circuitry (i.e., filtering). Kosaka discloses the use of a reshaping circuit (see figure 1, 100 and column 2, lines 34 – 37) as a necessary part of receiving a transmitted signal. It would have been obvious to one of ordinary skill in the art at the time of invention to provide appropriate signal filtering to ensure proper circuit operation.

### ***Allowable Subject Matter***

5. Claims 34 – 41, 47, and 49 – 61 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: Amended claims do not appear to be anticipated or rendered obvious by prior art.

### ***Specification***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Russer (US-3,835,398), Forsberg (US-4,464,769), Evans (US-4,546,486), Rozema (US-4,696,016), Miyashita (US-5,889,828), and White (US-6,008,746) all disclose edge and phase detectors along with various clock recovery techniques.

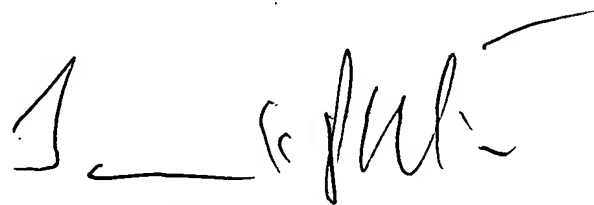
**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacob Meek whose telephone number is (571)272-3013. The examiner can normally be reached on 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571)272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMM  
9/14/05



JAY K. PATEL  
SUPERVISORY PATENT EXAMINER